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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,448	04/01/2001	Ismail Eldumati	50944.7300	9496

25700 7590 11/17/2004

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EXAMINER

KUMAR, PANKAJ

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,448

Applicant(s)

ELDUMIATI ET AL.

Examiner

Pankaj Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/1/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-42 is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-12, 14-23 and 43-49 is/are rejected.
- 7) ☒ Claim(s) 8, 9 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *. See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 16-18 recite the limitation "claim 16" in claim 16. There is insufficient antecedent basis for this limitation in the claim. Claims 17-18 depend on claim 16. The office suggests that claim 16 might be dependent on claim 15.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7, 10-12, 14-23, 43-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatia 6,052,803. Here is how the reference teaches the claims:
6. As per claim 1: A method of identifying a connection between a first data entity and a second data entity, said method comprising: connecting said first data entity (Bhatia fig. 1: 300) with said second data entity (Bhatia fig. 1: 60, 70); creating a pseudo-unique identification code for said connection (Bhatia fig. 9c: 980: calculate subnet mask; fig. 2: dynamic ip address

assignment; fig. 16: 1685 key); and storing said pseudo-unique identification information (Bhatia fig. 9c: 980: save calculated subnet mask).

7. What Bhatia does not teach is data entities. What Bhatia teaches are modems. The office takes official notice that modems work with data. It would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to teach that the data entities are modems. One would be motivated to do so since modems contain and work with data.

8. As per claim 2: The method of claim 1 wherein said pseudo-unique identification information comprises a string that is pseudo-randomly generated (Bhatia fig. 9c: 980 calculation based on accommodating the least number of hosts but no less than 4).

9. As per claim 3: The method of claim 1 wherein said storing step occurs on both said first data entity and said second data entity (Bhatia fig. 9B: 955; fig. 9C: 980: save IP addresses in the same subnet, set ip addresses).

10. As per claim 4: The method of claim 1 further comprising storing diagnostic data (Bhatia fig. 16: 1660 update) such that said diagnostic data is associated with said pseudo-unique identification information (Bhatia fig. 16: 1685 key; will only update if it reads key value so it knows that the update is from an authentic source).

11. As per claim 5: The method of claim 1 wherein said first data entity comprises a first modem (Bhatia fig. 1: 300) and said second data entity comprises a second modem (Bhatia fig. 1: 60, 70 have modems).

12. As per claim 6: A method of communicating between a first modem and a second modem comprising: opening a primary data channel between said first modem and said second modem (Bhatia fig. 4B: analog ports; col. 7 lines 46-50: fig. 4b shows LAN modem implemented in fig.

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2); and transmitting diagnostic/maintenance data (Bhatia fig. 5-7:) on a secondary logic channel (Bhatia fig. 4B: 40).

13. What Bhatia does not teach is that one set of channels are primary and another are secondary. It would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to teach either 40 or 25 to be primary and the other to be secondary. One would be motivated to do so since applicant has not disclosed that this feature provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with 40 or 25 being primary and the other being secondary because actions are occurring in both as claimed. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to obtain the invention as specified in this claim.

14. As per claim 7: the method of claim 6 further comprising determining the capabilities of said first modem (Bhatia figs. 5,6: 505 the act of receiving packet from local host is a capability) and said second modem (Bhatia fig. 7: 705 the act of receiving calls setup packet from ISDN network is a capability) before said transmitting step (Bhatia figs. 5-7: 725, 730, 735, 740, 635, 640, 645, 650, 535, 540, 545, 550 after link is established and call connected would transmission occur; capabilities are determined before this); and optimizing said secondary logic channel based on said determining step (Bhatia fig. 5: routing packet, and various checks all optimize such as by routing based on information received and not to an incorrect location).

15. As per claim 10: The method of claim 6 further comprising: sending a request from said first modem to said second modem via said secondary logic channel (Bhatia fig. 4B: requests through 40); and transmitting data in response to said request from said second modem to said

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first modem via said secondary logic channel (Bhatia col. 7 lines 50-63; figs. 4B, 5-7: figs. 5-7 relate to ISDN 40 in fig. 4B; link is established to transmit data; requests pingponging).

16. As per claim 11: A method of using a secondary communications channel between a first modem and a second modem comprising: sending diagnostic information on said secondary communications channel (discussed above especially with respect to claim 6). What Bhatia does not teach is that one set of channels are primary and another are secondary. It would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to teach either 40 or 25 to be primary and the other to be secondary. One would be motivated to do so since applicant has not disclosed that this feature provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with 40 or 25 being primary and the other being secondary because actions are occurring in both as claimed. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to obtain the invention as specified in this claim.

17. As per claim 12: The method of claim 11 wherein said diagnostic information includes at least one piece of information concerning one or more devices connected to said secondary communications channel (Bhatia figs. 5-7: packet destination).

18. As per claim 14: The method of claim 11 wherein said diagnostic information includes pseudo-unique identification information regarding a particular connection. (discussed above in respect to other claims).

19. As per claim 15: A method of using a secondary communications channel between a first modem and a second modem comprising: indicating that diagnostic information will be in a

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certain format (Bhatia fig. 10: communicating in certain formats such as HTTP), and sending said diagnostic/maintenance information on said secondary communications channel, wherein, said diagnostic/maintenance information contains information in a plurality of different areas (Bhatia figs. 5-7: contains information in areas of routing destination; fig. 4b: 432, 435, 415, 418, 421, 446, 453, 461, 475, 438). (remainder discussed above with respect to other claims) What Bhatia does not teach is that one set of channels are primary and another are secondary. It would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to teach either 40 or 25 to be primary and the other to be secondary. One would be motivated to do so since applicant has not disclosed that this feature provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with 40 or 25 being primary and the other being secondary because actions are occurring in both as claimed. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to obtain the invention as specified in this claim.

20. As per claim 16: The method of claim 16 wherein said diagnostic/maintenance information further comprises pseudo-unique identification information. (discussed above with respect to other claims)

21. As per claim 17: The method of claim 16 wherein said diagnostic/maintenance information further comprises information regarding the quality of the connection between said first modem and said second modem (Bhatia paragraph 75: "For all such encapsulated packets, driver 428 checks the Ethernet addresses of each packet for accuracy and performs a cyclic redundancy check (CRC) on the entire encapsulated packet for error detection.").

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22. As per claim 18: the method of claim 16 said diagnostic information is interlaced with indications of the area of said information (Bhatia figs. 2 are interlaced with the id addresses which indicate the area).

23. As per claim 19: A method of using call identification information comprising: establishing a connection between a first modem and a second modem (Bhatia: explained above and also in various locations in fig. 12 such as 1268); sending call identification information for a previous connection (not in Bhatia but would be obvious as explained below) from said first modem to said second modem (Bhatia fig. 12: 1273, 1274: packet is queued and is sent in a later call); and matching said call identification information with information stored by said second modem (Bhatia fig. 15c: 1558, 1560).

24. What Bhatia does not teach is that queued packet is equivalent to previous connection. It is common knowledge that packet contains connection information such as destination address. It would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to teach previous connection. One would be motivated to do so since a queued packet would contain the prior connection address.

25. As per claim 20: the method of claim 19 wherein said sending step is performed through the use of a secondary data channel (Bhatia fig. 12c: ISDN call; fig. 4b: ISDN interface 40).

26. As per claim 21: the method of claim 19 further comprising: comparing said call identification with information regarding a different connection (Bhatia fig. 12: destination connection data in queued packets are compared with searches such as 1242 to find an IP address call identification match).

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27. As per claim 22: The method of claim 19 wherein said different connection (Bhatia fig. 12: destination connection data in queued packets) comprises a current connection between said first modem and said second modem (Bhatia fig. 12: 1274).

28. As per claim 23: The method of claim 19 wherein said call identification information comprises pseudo-unique call identification information; and diagnostic data associated with the connection between said first modem and said second modem. (discussed above in respect to other claims)

29. As per claim 43: A data communication method for use by a first modem in communication with a first system, a second system and a second modem, said method comprising: establishing an error corrected data channel with said second modem (Bhatia paragraph 75: CRC); establishing a non-error corrected data channel (not in Bhatia but would be obvious as explained below) with said second modem (Bhatia: fig. 12: match not found 1258); receiving diagnostics data from said second modem over said non-error corrected data channel (Bhatia fig. 12 receiving diagnostics data such as packet's destination address); and transmitting said diagnostics data to said second system (Bhatia fig. 1: data to and from 300 to other networks).

30. What Bhatia does not teach is that the non-error corrected data channel is equivalent to address match not being found. It is common knowledge that if a match is not found and the packet is discarded as in Bhatia that the error was not corrected. It would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to teach that non-error corrected data channel is equivalent to address match not being found. One would be motivated

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to do so since if a match is not found, the discarding of a packet is inefficient and hence and the error was not corrected.

31. As per claim 44: the method of claim 43, wherein said error corrected data channel and said non-error corrected channel are provided (discussed above with respect to other claims) based on V.42 Recommendation (not in Bhatia). What Bhatia does not teach is the V.42 standard recommendation. It would have been obvious to one skilled in the art at the time of the invention to modify Bhatia to teach V.42. One would be motivated to do so where equipment is recommended or required to comply with V.42 standards.

32. As per claim 45: the method of claim 43, wherein said diagnostics data are received via unnumbered information frames (Bhatia fig. 13b: name of provider).

33. As per claim 46: the method of claim 45, wherein each of said unnumbered information frames includes a diagnostics type field (Bhatia fig. 13b: diagnostic ISP or private network field).

34. As per claim 47: the method of claim 45, wherein each of said unnumbered information frames includes a frame type field indicative of a response frame or a command frame (Bhatia fig. 13b: if sp=...).

35. As per claim 48: the method of claim 45, wherein each of said unnumbered information frames includes a diagnostics code field (Bhatia fig. 13b: code is PN for private network and ISP for internet service provider).

36. As per claim 49: the method of claim 43, wherein each of said unnumbered information frames includes a diagnostics information field (Bhatia fig. 13b: diagnostic ISP or private network field provides information).

Allowable Subject Matter

37. Claims 8, 9, 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

38. Claims 24-42 are allowed.

39. The following is a statement of reasons for the indication of allowable subject matter: The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with:

40. As per claim 24 and its dependent claims: establishing an error corrected data channel over said communication line with said second modem establishing a non-error corrected data channel over said communication line with said second modem in response to said second modem identification data;

41. As per claim 33 and its dependent claims: a processor configured to establish an error corrected data channel and a non-error corrected data over said communication line with said second modem in response to said second modem identification data;

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Mon, Tues, Wed and Thurs after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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